

# EUROPEAN PATENT OFFICE

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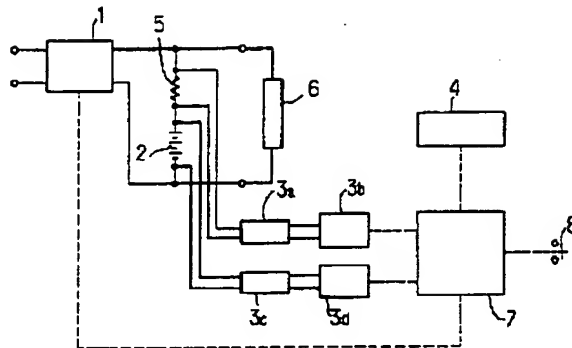
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G05F 1/10 // H01M 10/48

TITLE : POWER SUPPLY EQUIPPED WITH  
SEALED LEAD-ACID BATTERY



ABSTRACT : PROBLEM TO BE SOLVED: To provide a power supply equipped with sealed lead-acid batteries which enables the impedance inside the sealed lead-acid batteries to be measured precisely without providing an exclusive AC current conducting part.

SOLUTION: As a charging equipment 1 for charging sealed lead-acid batteries 2 by the floating charge, a charger is used in which an output voltage is changed over to an ordinarily set voltage or a voltage lower than the former one with a constant frequency. When the output voltage of the charging equipment 1 is low, a discharging current is caused to flow from the sealed lead-acid batteries 2 via a load 6 and a shunt resistance 5. From the wave form of the discharging current outputted by the sealed lead-acid batteries 2 at this time and the wave form of their voltage response, the Fourier transform values having the constant frequency above as a basic frequency are obtained by a first and second Fourier transforming means comprising a microprocessor 7. From these transform values, inside impedance is obtained by an impedance calculating means made up of the microprocessor 7. Then, a displaying part 4 displays the result of judgment of the deteriorated state of the sealed lead-acid batteries 2 based on this inside impedance.

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